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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,033	11/24/2003	Wayne S. Harris	89190.116203/DP-307829CIP	4743
22851	7590	04/12/2005		
DELPHI TECHNOLOGIES, INC. M/C 480-410-202 PO BOX 5052 TROY, MI 48007			EXAMINER CHANG, CHING	
			ART UNIT 3748	PAPER NUMBER

DATE MAILED: 04/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/721,033	Applicant(s) HARRIS, WAYNE S.	
	Examiner Ching Chang	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. ***Claims 5-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.***

More specifically, “ “ said piston “ in claims 5-6 lacks antecedent basis, and renders the claimed subject matter indefinite.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. ***Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Sugimoto et al. (US Patent 5,515,820).***

Sugimoto discloses a lock-pin cartridge (29, 30₁) for a variable valve activation rocker arm 19₁), comprising: a) a body (29) having a closure (surrounding 36) at a first

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end; b) a piston assembly (32) disposed in said body and extending through a second end (the other end of 29, opposite to 36) thereof for latching and unlatching said rocker arm, said piston assembly being spaced apart from said first end to define a hydraulic chamber (36) in said body; and c) spring means (43) disposed in said body between a piston (41) and said second end for urging said piston toward said first end.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. ***Claims 1-2, 4, and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. (US Patent 5,515,820) in view of Spath et al. (US Patent 6,325,030).***

Sugimoto discloses a variable valve activation assembly (See Figs. 1-4) wherein a first member (17₁) is latchable and unlatchable from a second member (19₁) thereof, comprising a lock-pin cadridge (29, 30₁) including: a body (29) on said first member and having an axial bore (35) having first and second ends, said second end (the open end of 29) having a passage therethrough, a piston assembly (32) having a locking pin (42) and a piston (41) disposed in said bore, said locking pin extending through said second end passage to provide said latching and unlatching of said first

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and second members, said piston being spaced apart from said first and second ends to define a hydraulic chamber (36) and a spring chamber (with 43 therein) within said bore on opposite sides of said piston, and biasing means (43) disposed in said spring chamber for urging said piston assembly toward one of said first and second ends; wherein said hydraulic chamber comprises said first end and said spring chamber comprises said second end; further comprising at least one perforation (through 37) in said body for providing oil to said hydraulic chamber.

Sugimoto discloses the invention as recited above, however, fails to disclose the said body being disposable in a bore of said first member.

The patent to Spath on the other hand, teaches that it is conventional in the cam follower art, to utilize a lock-pin cartridge (22, 28) with a disposable body (28) received (through a hole 26b) in a first member (26), to latch and unlatch the said first member to a second member (20).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the disposable body configuration of a lock-pin cartridge as taught by spath in the Sugimoto device, since the use thereof would provide an improved engine valve actuation system, with a less assembly cost and replaceable components.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto in view of Spath (as applied to claim 1 above), and further in view of Miyasaka et al. (US Patent 6,394,052).

The modified Sugimoto device, however, fails to disclose that said spring chamber comprises said first end and said hydraulic chamber comprises said second end.

The patent to Miyasaka on the other hand, teaches that it is conventional in the lock-pin art, to utilize a locking mechanism (34) having a spring chamber (spring 36 therein) in the first end and a hydraulic chamber (45) comprises in the second end.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the configuration of a locking mechanism having a spring chamber in the first end and a hydraulic chamber in the second end as taught by Miyasak in the modified Sugimoto device, since the use thereof would provide an alternative packaging arrangement for a locking mechanism in an engine valve actuation system.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugomoto et al. (US Patent 5,515,821) in view of Spath et al. (US Patent 6,325,030).

Sugimoto, however, fails to disclose that said piston assembly includes an extension extending through an aperture in said first end closure for engaging piston actuating means.

The patent to Spath on the other hand, teaches that it is conventional in the cam follower art, to utilize a piston assembly (22) having an extension (76) extending through an aperture in its first end closure (See Figs. 3-4) for engaging piston actuating means (See Col. 5, line 67 through Col. 6, line 10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the extension from a piston assembly to engage piston actuating means as taught by Spath in the Sugimoto device, since the use thereof would provide a more reliable and controllable engine valve actuation system.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ching Chang whose telephone number is (571)272-4857. The examiner can normally be reached on M-Th, 7:00 AM -5:00 PM.

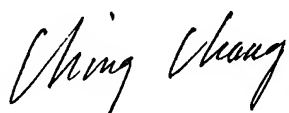
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571)272-4859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

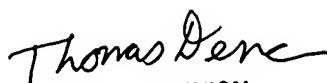
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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner



Ching Chang



THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700